

20  
Claims

1. A system for use in improving management of a workflow process, said workflow process comprising a sequence of tasks to be performed by at least one individual, comprising:

5           an interface processor for receiving a message indicating occurrence of a performance deficiency in a workflow process;

          a data processor for storing records in a repository, said record comprising data representing current workflow context information and information identifying said performance deficiency, in response to said received message; and

10           an analyzer for analyzing said data in said record identifying said performance deficiency to support improvement of said workflow process.

2. A system according to claim 1, wherein

15           said data processor stores a plurality of records in at least one repository, said records comprising data representing current workflow context information and information identifying a plurality of corresponding performance deficiencies, and

          said analyzer analyzes said data in said records identifying said performance deficiencies to identify a pattern of performance deficiencies in said workflow process.

20           3. A system according to claim 2, wherein

          said analyzer prioritizes identified performance deficiencies in said workflow process.

25           4. A system according to claim 2, wherein

          said analyzer initiates generation of an alert message to a user in response to analyzing said records.

          5. A system according to claim 2, wherein

30           said data processor stores said plurality of records in chronological sequence to facilitate identification of a time of first occurrence of a particular performance deficiency.

6. A system according to claim 1, wherein

said performance deficiency comprises at least one of, (a) an error, (b) a deficiency in operation, (c) performance below a performance achievable with a proposed workflow process modification, (d) a deficiency of speed of operation, (e) a deficiency in usability, (f) a deficiency in efficiency, (g) a deficiency in operational capability and (h) a deficiency in output quality.

7. A system according to claim 1, wherein

said context information includes at least one of, (a) a time, (b) a user identifier, (c) a workflow task identifier, (d) a workflow process input parameter, (e) a workflow process output parameter, (f) a decision rule applied in said workflow process, (g) a location, (h) an active participant, (i) an input terminal and (j) a workflow task result.

8. A system according to claim 1, wherein

said received message indicating occurrence of a performance deficiency in a workflow process is initiated in response to at least one of, (a) user data entry in a generated user interface display image and (b) automated performance assessment derived from workflow process operation monitoring.

9. A system according to claim 1, wherein

said workflow process comprising a sequence of tasks to be performed by at least one individual to support healthcare delivery to a patient.

10. A system according to claim 1, wherein

said analyzer automatically parses said message indicating occurrence of said performance deficiency to identify a category of said performance deficiency.

11. A system according to claim 10, wherein

said analyzer automatically identifies said category of said performance deficiency by at least one of, (a) text string matching and (b) key word matching and

said analyzer initiates generation of an alert message to a particular participant associated with said identified category of performance deficiency based on a stored map associating said particular participant with said category.

5           12. A system according to claim 1, wherein  
said analyzer analyzes said data in said records by statistically evaluating error frequency of identified performance deficiencies associated with particular workflow tasks.

10           13. A system for use in improving management of a workflow process, said workflow process comprising a sequence of tasks to be performed by at least one individual, comprising:

an interface processor for receiving a message indicating occurrence of a performance deficiency in a workflow process;

15           a data processor for storing a plurality of records in at least one repository, said records comprising data representing workflow context information and information identifying a plurality of corresponding performance deficiencies, in response to said received message; and

an analyzer for initiating generation of an alert message to a user in response to analyzing said records.

20           14. A user interface system for use in improving management of a workflow process, said workflow process comprising a sequence of tasks to be performed by at least one individual to support healthcare delivery to a patient, comprising:

25           a display generator for initiating display of data representing at least one image enabling a user to enter data identifying a performance deficiency in a workflow process;

a data processor for storing a plurality of records in at least one repository, said records comprising data representing workflow context information and information identifying a plurality of corresponding performance deficiencies, in response to said entered data identifying said performance deficiency; and

30           an analyzer for analyzing said data in said record identifying said performance deficiency to support improvement of said workflow process.

15. A system according to claim 14, wherein

said at least one image supports user entry of items including at least one of,

(a) data identifying a particular performance deficiency by selection

5 from a predetermined list of items indicating predetermined categories of performance deficiency,

(b) text concerning a particular performance deficiency,

(c) data selecting a checkbox identifying a particular performance  
deficiency from a plurality of checkboxes associated with a corresponding plurality of  
10 predetermined categories of performance deficiency,

(d) data identifying a particular performance deficiency,

(e) data identifying a magnitude of a particular performance deficiency,

(f) data identifying urgency of a particular performance deficiency and

(g) data identifying user dissatisfaction with particular workflow task  
15 performance.

16. A system according to claim 15, wherein

in response to said user entry of said items, said data processor stores said  
records comprising data representing workflow context information.

20

17. A system according to claim 14, wherein

said at least one image includes pre-populated items including at least one of,

(a) a time, (b) a user identifier, (c) a context identifier, (d) a workflow task identifier, (e) a  
workflow process input parameter, (f) a workflow process output parameter, (g) a decision  
25 rule applied in said workflow process, (h) a location, (i) an active participant, and (j) a  
workflow task result, and (k) a terminal identifier.

18. A system according to claim 14, wherein

said data processor stores a pointer for use in locating said records in said at  
30 least one repository.

19. A system according to claim 14, wherein

said display generator initiates display of data representing a workflow image supporting user performance of a task involved in delivering healthcare to a patient, said workflow image including an image element enabling user initiation of display of said data  
5 representing said at least one image enabling a user to enter data identifying said performance deficiency in said workflow process.

20. A system according to claim 14, including

said display generator automatically selects a particular image for display  
10 enabling a user to enter data identifying said performance deficiency in said workflow process, said particular image being selected based on a type of workflow task associated with said performance deficiency.

21. A system according to claim 20, wherein

said particular image for display is selected from images including at least one  
15 of, (a) an option list, (b) a bar enabling entry of a value on a scale, (c) a bar enabling entry of a coloured element representing a value on a scale, (d) a message initiation option, (e) a hotline initiation option and (f) an urgency selection option.

22. A system according to claim 14, including

a database associating said performance deficiency with a particular type of user interaction, said type of user interaction being associated with at least one of, (a) input of data in support of a workflow process, (b) output of data in response to a workflow process and (c) a decision made in support of a workflow process and  
20  
25 said display generator automatically selects an image for display in response to said particular type of user interaction associated with said type of workflow task.

23. A system according to claim 14, including

a database associating said performance deficiency with a particular attribute,  
30 said attribute comprising at least one of, (a) presence of data in a workflow process, (b) lateness of arrival of data in response to a workflow process, (c) quality of performance of a

task of a workflow process, (d) resources associated with a workflow process, (e) responsibility for a task of a workflow process, (f) urgency associated with a task of a workflow process and (g) severity of a problem associated with performance of a task of a workflow process, and

5                   said display generator automatically selects an image for display in response to said particular attribute.

24. A system according to claim 14, including  
a database associating said performance deficiency with a particular type of  
10 user interaction, said type of user interaction being associated with at least one of, (a) input of data in support of a workflow process, (b) output of data in response to a workflow process and (c) a decision made in support of a workflow process.

25. A system according to claim 24, wherein  
15                   said database associates a category of performance deficiency with said type of user interaction.

26. A system according to claim 14, including  
said at least one image enables a user to interactively modify an image  
20 supporting user entry of data identifying a performance deficiency in a workflow process.

27. A system according to claim 14, including  
a database associating said performance deficiency with a particular type of  
user interaction, said type of user interaction being associated with at least one of, (a) input of  
25 data in support of a workflow process, (b) output of data in response to a workflow process and (c) a decision made in support of a workflow process.

28. A method for use in improving management of a workflow process, said  
workflow process comprising a sequence of tasks to be performed by at least one individual,  
30 said method comprising the activities of:

receiving a message indicating occurrence of a performance deficiency in a workflow process;

storing records in a repository, said record comprising data representing current workflow context information and information identifying said performance

5 deficiency, in response to said received message; and

analyzing said data in said record identifying said performance deficiency to support improvement of said workflow process.

29. A method for use in improving management of a workflow process, said  
10 workflow process comprising a sequence of tasks to be performed by at least one individual, said method comprising the activities of:

receiving a message indicating occurrence of a performance deficiency in a workflow process;

15 storing a plurality of records in at least one repository, said records comprising data representing workflow context information and information identifying a plurality of corresponding performance deficiencies, in response to said received message; and

initiating generation of an alert message to a user in response to analyzing said records.

20 30. A method for providing a user interface for use in improving management of a workflow process, said workflow process comprising a sequence of tasks to be performed by at least one individual to support healthcare delivery to a patient, said method comprising the activities of:

25 initiating display of data representing at least one image enabling a user to enter data identifying a performance deficiency in a workflow process;

storing a plurality of records in at least one repository, said records comprising data representing workflow context information and information identifying a plurality of corresponding performance deficiencies, in response to said entered data identifying said performance deficiency; and

30 analyzing said data in said record identifying said performance deficiency to support improvement of said workflow process.